

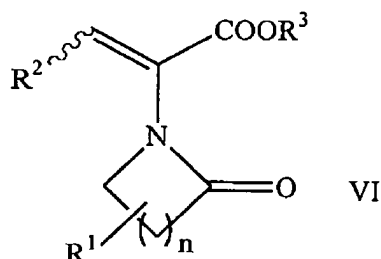
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Amendments to the Claims

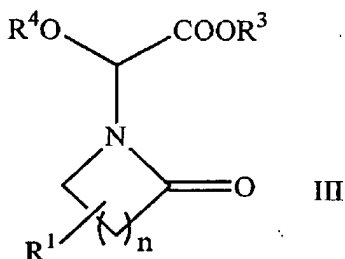
Claims 1 – 47 (Previously Canceled)

48. (Amended) A method for producing a compound having the formula VI



comprising

(a) reacting a compound having the formula III



with PX_3 , wherein X is fluoride, chloride, bromide, or iodide, to produce a halogenated lactam;

(b) reacting the halogenated lactam produced in step (a) with a phosphite having the formula $P(OR^6)_3$, wherein R^6 is ~~substituted or unsubstituted~~, branched or straight chain C_1 to C_{20} alkyl, branched or straight chain C_1 to C_{20} alkyl substituted with one to three groups selected from cyano,

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hydroxy, aryl, halogen, -OR, -CO₂R, and -OCOR, or substituted or unsubstituted C₃ to C₈ cycloalkyl, or C₃ to C₈ cycloalkyl substituted with one to three groups selected from cyano, hydroxy, aryl, halogen, -OR, -CO₂R, and -OCOR, to produce a phosphonated lactam; and

- (c) reacting the phosphonated lactam produced in step (b) with an aldehyde having the formula HC(O)R² in the presence of a base,

wherein steps (a), (b), and (c) are performed *in situ*, and

wherein R¹, R², R³ and R⁴ are, independently, substituted or unsubstituted, branched or straight chain C₁ to C₂₀ alkyl; branched or straight chain C₁ to C₂₀ alkyl substituted with one to three groups selected from cyano, hydroxy, aryl, halogen, -OR, -CO₂R, and -OCOR; substituted or unsubstituted C₃ to C₈ cycloalkyl; C₃ to C₈ cycloalkyl substituted with one to three groups selected from cyano, hydroxy, aryl, halogen, -OR, -CO₂R, and -OCOR; substituted or unsubstituted C₆ to C₂₀ aryl; C₆ to C₂₀ aryl substituted with one to three groups selected from C₁-C₆-alkyl, C₆-C₁₀ aryl, C₁-C₆-alkoxy, halogen, carboxy, cyano, C₁-C₆-alkanoyloxy, C₁-C₆-alkylthio, C₁-C₆-alkylsulfonyl, trifluoromethyl, hydroxy, C₂-C₆-alkoxycarbonyl, C₂-C₆-alkanoylamino, -OR', SR', -SO₂R', -NHSO₂R' or -NHCO₂R'; or substituted or unsubstituted C₄ to C₂₀ heteroaryl, or a 5- or 6-membered aromatic ring containing 1 to 3 heteroatoms selected from the group consisting of oxygen, sulfur and nitrogen, which may be substituted with up to three groups selected from C₁-C₆-alkyl, C₁-C₆-alkoxy, halogen, C₁-C₆-alkylthio, aryl, arylthio, aryloxy, C₂-C₆-alkoxycarbonyl and C₂-C₆-alkanoylamino; R is C₁ to C₆ alkyl and R' is phenyl, naphthyl, or phenyl or naphthyl substituted with one to three groups selected from C₁-C₆-alkyl, C₆-C₁₀ aryl, C₁-C₆-alkoxy or halogen; R¹, R² and R⁴ may, independently, be hydrogen; and n is from 0 to 5 2.

Claims 49 and 50 (Previously Canceled)

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51. (Amended) The method of Claim 48 wherein ~~n is 2 and~~ R¹ is hydrogen.
52. (Previously Added) The method of Claim 51 wherein R² and R³ are methyl.
53. (Previously Added) The method of Claim 51 wherein R² is methyl and R³ is ethyl.
54. (Previously Added) The method of Claim 52 wherein R⁴ is methyl or ethyl.
55. (Previously Added) The method of Claim 53 wherein R⁴ is methyl.
56. (Previously Added) The method of Claim 52 or 53 wherein R⁶ is methyl or ethyl.
57. (Previously Added) The method of claim 48 wherein the base is non-hydroxide base with a pKa of about 13 or above.
58. (Previously Added) The method of claim 57 wherein the base is an amidine base or a guanidine base.
59. (Amended) The method of claim 57 wherein the base is 1,5-diazabicyclo[4.3.0]non-5-ene (DBN), 1,8-diazabicyclo[5.4.0]undec-7-ene (DBU), or ~~tetramethylguanid~~ tetramethylguanidine.